

TAYLOR
Appl. No. 10/510,604
October 8, 2004

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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-46 (cancelled).

47 (currently amended). A method for improving the thermal oxidative stability of a jet fuel which comprises selectively reducing the active concentration in the fuel of N-H containing heterocyclic aromatic compounds in which the nitrogen atom of the N-H group is part of the aromatic system, by treatment with a suitable adsorbent material comprising a compound having a benzaldehyde functionality supported on a suitable support and wherein said fuel also contains an active concentration of metal compounds or will be exposed to active metal compounds in storage or in use.

48 (previously presented). The method according to claim 47, wherein said fuel contains an active concentration of metal compounds, and which method further comprises reducing the active concentration of metal compounds present in the fuel.

49-50 (canceled).

51 (currently amended). The method according to claim 50 47, wherein the compound having a benzaldehyde functionality is a 4-aminobenzaldehyde.

52 (previously presented). The method according to claim 51, wherein the 4-aminobenzaldehyde is a 4-dialkylaminobenzaldehyde.

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53 (previously presented). The method according to claim 52, wherein the alkyl groups of the 4-dialkylaminobenzaldehyde are independently selected from methyl, ethyl, propyl and butyl.

54 (previously presented). The method according to claim 53, wherein the 4-dialkylaminobenzaldehyde is 4-dimethylaminobenzaldehyde.

55 (currently amended). The method according to claim 50 47, wherein the suitable support is selected from the group consisting of clays, carbons, aluminas, silicas and zeolites.

56 (currently amended). The method according to claim 50 47, wherein the suitable support is a clay.

57 (currently amended). The method according to claim 56 47, wherein the clay is a kaolinite.

58 (currently amended). The method according to claim 50 47, wherein the compound having a benzaldehyde functionality is adsorbed on the suitable support to a level of at least 0.5 of a monolayer.

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59 (currently amended). The method according to claim 50 47, wherein the compound having a benzaldehyde functionality is adsorbed to a level of from 0.8 to 1.2 monolayers.

60 (previously presented). The method according to claim 57, wherein the compound having a benzaldehyde functionality is 4-dimethylaminobenzaldehyde and the suitable support is kaolinite.

61 (previously presented). The method according to claim 47, wherein the N-H containing heterocyclic aromatic compounds comprise one or more of pyrrole, indole, pyrazole, carbazole, substituted pyrroles, indoles, pyrazoles and carbazoles.

62 (previously presented). The method according to claim 47, wherein the N-H containing heterocyclic aromatic compounds comprise one or more of pyrrole, indole, substituted pyrroles and substituted indoles.

63 (previously presented). The method according to claim 48, wherein the N-H containing heterocyclic aromatic compounds comprise one or more of pyrrole, indole, substituted pyrroles and substituted indoles.

64-65 (canceled).

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66 (previously presented). The method according to claim 51, wherein the N-H containing heterocyclic aromatic compounds comprise one or more of pyrrole, indole, substituted pyrroles and substituted indoles.

67 (previously presented). The method according to claim 52, wherein the N-H containing heterocyclic aromatic compounds comprise one or more of pyrrole, indole, substituted pyrroles and substituted indoles.

68 (previously presented). The method according to claim 53, wherein the N-H containing heterocyclic aromatic compounds comprise one or more of pyrrole, indole, substituted pyrroles and substituted indoles.

69 (previously presented). The method according to claim 55, wherein the N-H containing heterocyclic aromatic compounds comprise one or more of pyrrole, indole, substituted pyrroles and substituted indoles.

70 (previously presented). The method according to claim 60, wherein the N-H containing heterocyclic aromatic compounds comprise one or more of pyrrole, indole, substituted pyrroles and substituted indoles.

71 (previously presented). The method according to claim 47, wherein the metal compounds comprise compounds of transition metals.

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72 (previously presented). The method according to claim 47, wherein the metal compounds comprise copper and/or iron compounds present in the fuel.

73-74 (canceled).

75 (previously presented). The method according to claim 50, wherein the metal compounds comprise copper and/or iron compounds present in the fuel.

76 (previously presented). The method according to claim 70, wherein the metal compounds comprise copper and/or iron compounds present in the fuel.

77 (new). The method according to claim 51 wherein the benzaldehyde is a 4-aminobenzaldehyde functionality which is chemically part of a suitable support as an end group or pendant group on a polymer backbone that forms the support material.